Kramer Electronics, Ltd.

USER MANUAL

Model:

PT-1PS

CAT5 Power Supply

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1 Introduction

Welcome to Kramer Electronics (since 1981): a world of unique, creative and affordable solutions to the infinite range of problems that confront the video, audio and presentation professional on a daily basis. In recent years, we have redesigned and upgraded most of our line, making the best even better! Our 500-plus different models now appear in 8 Groups[1], which are clearly defined by function.

Congratulations on purchasing your Kramer MultiTOOLS® **PT-1PS** *CAT5 Power Supply*, which is an ideal accessory for providing power to twisted pair CAT5 transmitters and receivers.

The package includes the following items:

- **PT-1PS** *CAT5 Power Supply*
- Power adapter (12V DC Input)
- This user manual[2]

2 Getting Started

We recommend that you:

- Unpack the equipment carefully and save the original box and packaging materials for possible future shipment
- Review the contents of this user manual
- Use Kramer high performance high resolution cables[3]

3 Overview

The **PT-1PS** is a CAT5 power supply accessory, which is used to power Kramer twisted pair CAT5 transmitter and receiver systems when the power connect feature applies (see section 3.1). You can install the **PT-1PS** anywhere[4] between the transmitter and the receiver to supply power to both of them.

The **PT-1PS** lets you install the power supply in a location of your choice. For example, a transmitter and receiver pair usually has power connectors for power supply and in most cases one power supply is sufficient for both units.

1 GROUP 1: Distribution Amplifiers; GROUP 2: Video and Audio Switchers, Matrix Switchers and Controllers; GROUP 3: Video, Audio, VGA/XGA Processors; GROUP 4: Interfaces and Sync Processors; GROUP 5: Twisted Pair Interfaces; GROUP 6: Accessories and Rack Adapters; GROUP 7: Scan Converters and Scalers; and GROUP 8: Cables and Connectors

2 Download up-to-date Kramer user manuals from our Web site: http://www.kramerelectronics.com

3 The complete list of Kramer cables is on our Web site at http://www.kramerelectronics.com

4 But not more than 50 meters from the transmitter and receiver (see section 3.1)

When installing these units however, you may want to choose where to connect the power supply[1]. Connecting a **PT-1PS** conveniently[2] along the line between the transmitter and receiver, can power both units simultaneously.

To achieve the best performance:

- Connect only good quality connection cables, thus avoiding interference, deterioration in signal quality due to poor matching, and elevated noise levels (often associated with low quality cables)
- Avoid interference from neighboring electrical appliances that may adversely influence signal quality and position your Kramer MultiTOOLS® **PT-1PS** away from moisture, excessive sunlight and dust

Caution – No operator-serviceable parts inside unit.

Warning – Use only the Kramer Electronics input power wall adapter that is provided with this unit[3].

Warning – Disconnect power and unplug unit from wall before installing or removing device or servicing unit.

3.1 Power Connect Feature

The Power Connect feature lets you power a transmitter / receiver system by connecting just one power adapter— to either the transmitter or the receiver. The other unit is fed via the cable connecting between the transmitter/receiver. The Power Connect feature applies as long as the cable can carry power. The distance does not exceed 50 meters on standard CAT5 cable, for longer distances, heavy gauge cable should be used[4].

For a CAT5 cable exceeding a distance of 50 meters, separate power supplies should be connected to the transmitter and to the receiver simultaneously.

3.2 Shielded Twisted Pair (STP) / Unshielded Twisted Pair (UTP)

The decision whether to use shielded twisted pair (STP) cable or unshielded twisted pair (UTP) cable depends on the nature of the application.

It is recommended that in applications with high interference, shielded twisted pair (STP) cable will give better results. However, the shield itself does create a

1 Either for esthetic reasons or due to the physical location of the mains electricity

2 Behind the wall, under a desk and so on

3 For example: model number AD2512C, part number 2535-000251

4 CAT5 cable is still suitable for the video/audio transmission, but not for feeding the power at these distances

capacitance that degrades the frequency response of the machines. For shorter distances, of 50m or so, shielded twisted pair (STP) cable is preferred because it provides protection from interference (degradation is non-apparent).

For a long-range application, unshielded twisted pair (UTP) cable is preferred. However, the unshielded twisted pair (UTP) cable should be installed far away from electric cables, motors etc., which are prone to create electrical interference.

4 Your PT-1PS CAT5 Power Supply

Figure 1 and Table 1 define the **PT-1PS** *CAT5 Power Supply*:

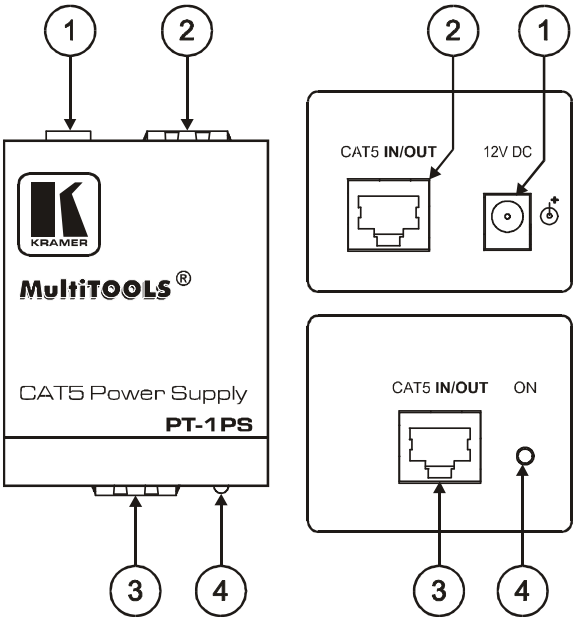


Figure 1: PT-1PS CAT5 Power Supply

Table 1: PT-1PS CAT5 Power Supply Features

#	Feature	Function
1	***12V DC***	+12V DC connector for powering the unit
2	***CAT5 IN/OUT*** Connector	Connect to the CAT5 cable
3	***CAT5 IN/OUT*** Connector	Connect to the CAT5 cable
4	***ON*** LED	Iluminates when receiving power

5 Connecting a PT-1PS CAT5 Power Supply

To connect the **PT-1PS**, do the following:

1. Connect a transmitter (for example, the Kramer **PT-110** *XGA Line Transmitter*) to the CAT5 IN/OUT connector[1] on the **PT-1PS**.
2. Connect the other CAT5 IN/OUT connector to a receiver (for example, the Kramer **TP-120** *XGA Line Receiver*).
3. Connect the 12V DC power adapter to the power socket on the **PT-1PS** and connect the adapter to the mains electricity.
   The ON LED illuminates.

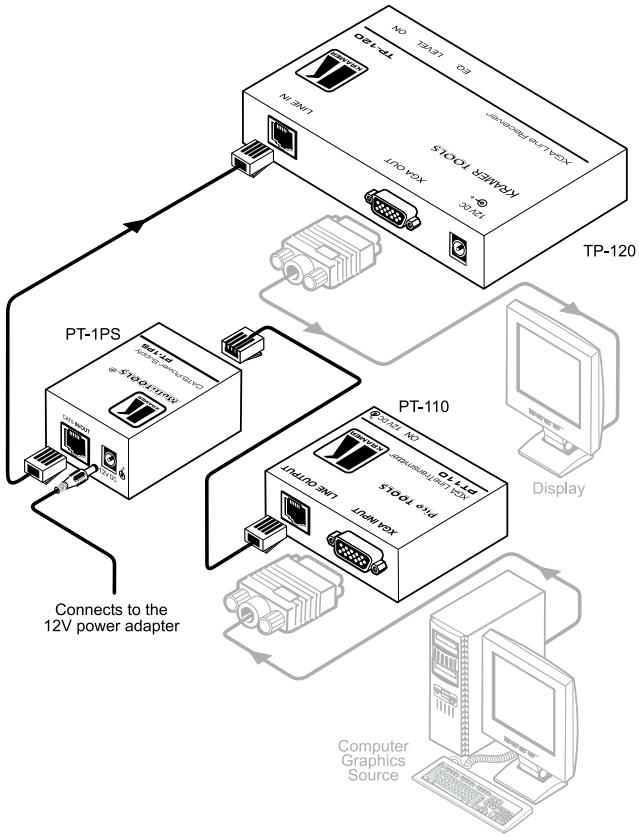


Figure 2: Connecting the PT-1PS CAT5 Power Supply

1 Either one of them

5.1 Wiring the CAT 5 LINE IN / LINE OUT RJ-45 Connectors

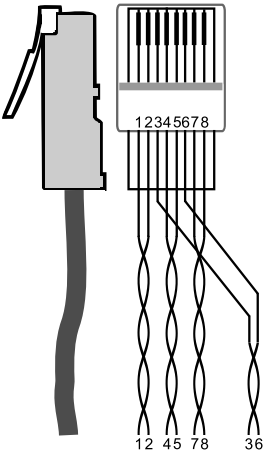
Table 2 and Figure 3 define the CAT 5 PINOUT, using a straight pin-to-pin cable with RJ-45 connectors:

Table 2: CAT 5 PINOUT

EIA /TIA 568A	
PIN	**Wire Color**
1	Green / White
2	Green
3	Orange / White
4	Blue
5	Blue / White
6	Orange
7	Brown / White
8	Brown
Pair 1	4 and 5
Pair 2	3 and 6
Pair 3	1 and 2
Pair 4	7 and 8

EIA /TIA 568B	
PIN	**Wire Color**
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown
Pair 1	4 and 5
Pair 2	1 and 2
Pair 3	3 and 6
Pair 4	7 and 8

Figure 3: CAT 5 PINOUT



6 Technical Specifications

Table 3 includes the technical specifications:

Table 3: Technical Specifications[1] of the PT-1PS

INPUT/OUTPUT:	2 x CAT5 on RJ45 connectors
POWER SOURCE:	12V DC
DIMENSIONS:	5.32cm x 4.36cm x 7.25cm (2.09" x 1.72" x 2.85") W, D, H
WEIGHT:	0.15kg. (0.55lbs.) approx.
ACCESSORIES:	Power adapter
OPTIONS:	CAT5 cable

1 Specifications are subject to change without notice

LIMITED WARRANTY

Kramer Electronics (hereafter *Kramer*) warrants this product free from defects in material and workmanship under the following terms.

HOW LONG IS THE WARRANTY

Labor and parts are warranted for seven years from the date of the first customer purchase.

WHO IS PROTECTED?

Only the first purchase customer may enforce this warranty.

WHAT IS COVERED AND WHAT IS NOT COVERED

Except as below, this warranty covers all defects in material or workmanship in this product. The following are not covered by the warranty:

1. Any product which is not distributed by Kramer, or which is not purchased from an authorized Kramer dealer. If you are uncertain as to whether a dealer is authorized, please contact Kramer at one of the agents listed in the web site www.kramerelectronics.com.
2. Any product, on which the serial number has been defaced, modified or removed.
3. Damage, deterioration or malfunction resulting from:
   - i) Accident, misuse, abuse, neglect, fire, water, lightning or other acts of nature
   - ii) Product modification, or failure to follow instructions supplied with the product
   - iii) Repair or attempted repair by anyone not authorized by Kramer
   - iv) Any shipment of the product (claims must be presented to the carrier)
   - v) Removal or installation of the product
   - vi) Any other cause, which does not relate to a product defect
   - vii) Cartons, equipment enclosures, cables or accessories used in conjunction with the product

WHAT WE WILL PAY FOR AND WHAT WE WILL NOT PAY FOR

We will pay labor and material expenses for covered items. We will not pay for the following:

1. Removal or installations charges.
2. Costs of initial technical adjustments (set-up), including adjustment of user controls or programming. These costs are the responsibility of the Kramer dealer from whom the product was purchased.
3. Shipping charges.

HOW YOU CAN GET WARRANTY SERVICE

1. To obtain service on you product, you must take or ship it prepaid to any authorized Kramer service center.
2. Whenever warranty service is required, the original dated invoice (or a copy) must be presented as proof of warranty coverage, and should be included in any shipment of the product. Please also include in any mailing a contact name, company, address, and a description of the problem(s).
3. For the name of the nearest Kramer authorized service center, consult your authorized dealer.

LIMITATION OF IMPLIED WARRANTIES

All implied warranties, including warranties of merchantability and fitness for a particular purpose, are limited in duration to the length of this warranty.

EXCLUSION OF DAMAGES

The liability of Kramer for any effective products is limited to the repair or replacement of the product at our option. Kramer shall not be liable for:

1. Damage to other property caused by defects in this product, damages based upon inconvenience, loss of use of the product, loss of time, commercial loss; or:
2. Any other damages, whether incidental, consequential or otherwise. Some countries may not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from place to place.
NOTE: All products returned to Kramer for service must have prior approval. This may be obtained from your dealer.
This equipment has been tested to determine compliance with the requirements of:

EN-50081:	"Electromagnetic compatibility (EMC); generic emission standard. Part 1: Residential, commercial and light industry"
EN-50082:	"Electromagnetic compatibility (EMC) generic immunity standard. Part 1: Residential, commercial and light industry environment".
CFR-47:	FCC Rules and Regulations: Part 15: “Radio frequency devices Subpart B – Unintentional radiators”

CAUTION!

- ⌦ Servicing the machines can only be done by an authorized Kramer technician. Any user who makes changes or modifications to the unit without the expressed approval of the manufacturer will void user authority to operate the equipment.
- ⌦ Use the supplied DC power supply to feed power to the machine.
- ⌦ Please use recommended interconnection cables to connect the machine to other components.

For the latest information on our products and a list of Kramer distributors, visit our Web site: www.kramerelectronics.com, where updates to this user manual may be found.
We welcome your questions, comments and feedback.

Safety Warning:
Disconnect the unit from the power supply before opening/servicing.

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